

REMARKS

Claims 2, 7, 9, 14, 16 and 21 are pending in this application. Claims 7, 14 and 21 are allowed. Claims 2, 9 and 16 are rejected. Claims 7, 14 and 21 are currently amended.

Claims 7, 14 and 12 are currently amended to correct punctuation in the manner suggested by the Examiner.

Claims 2, 9 and 16 are rejected under 35 U.S.C. 103(a) as being obvious based on US 5,933,420 (Jaszewski) in view of US 2004/0054774 (Barber). Because both references clearly describe network management stations which represent the problem that the present invention helps to overcome, a review of the context of the invention may be helpful. Network management stations which show the status of APs and STAs in a WLAN have been known for some time. As described in the references, the management station can use information from the APs to generate a mapping of the network. Theoretically, such mappings could indicate precisely where a new AP should be installed in a building. In practice, however, it is often not that simple. One problem is that the mapping provided by the management station does not always correspond exactly with the actual layout of APs in the building. There are various possible causes for this situation. For example, APs with an intervening obstruction might be mapped as being further apart than they actually are because signal strength attenuation attributable to the obstruction is interpreted as distance. An installer standing near the APs might recognize this situation. However, even having an installer at the AP can be unsatisfactory when APs are inconspicuously mounted, e.g., behind ceiling tiles, because the installer may not easily find the nearby APs to make a judgment call about whether distance or obstruction is affecting interference, and by how much. An installer might resort to installing the new AP and then referring to an updated mapping at the management station to guess how far and in what

direction to move the AP. This would typically be done iteratively until a reasonable outcome is achieved. However, this can be time consuming and inconvenient because either (1) the installer must walk back and forth between the location of the AP and the location of the management station, or (2) two installers (one at the AP, the other at the management station) can try to talk (with radios) through the placement of the new AP. Neither of those installation procedures is particularly satisfactory. A better approach is to eliminate the need to refer to the management station by having the AP itself provide an indication such as sound or flashing light to show the installer what is happening in the RF domain. This allows one installer to walk around the building with the AP in hand and evaluate the suitability of a location in real-time without reference to a management station, but rather by looking at or listening to the AP itself.

Claims 2, 9 and 16 recite an **access point feature** including a signal strength indicator **directly from the AP to the installer** that allows an installer to know the relative strength of signals which are received by the access point from other devices. Note, for example, the following limitations of claim 2:

A first **access point** operable to provide wireless network access to client devices coupled to a wireless network, the first access point comprising:

a receiver operable to detect a signal from a second access point, distinguish that signal from other signals, and measure strength of the signal; and

an indicator operable to provide **an external indication of the signal strength directly from the first access point to a human being, the indication being perceivable by the human being and also being indicative of the signal strength of the second access point,**

whereby proximity of the second access point relative to the first access point can be estimated by the human being directly from reference to the first access point without knowing the precise geographic location of the second access point.
(emphasis added)

In view of the above it will be appreciated that in order to meet the claimed limitations the art must show an access point providing an indication directly to a person - NOT to a management station located somewhere else in the network. Neither of the cited references suggest any sort of external indicator that is both (1) by the AP and (2) that can be perceived directly by the installer. Rather, the references both suggest that electronic data signals (imperceptible by a human being) are sent from an AP to a network manager (110 in Jaszewski) or command and control center (114 in Barber), where information is converted for display on a monitor. Clearly, neither the network manager (110) nor the CCC (114) is equivalent to an AP, and surely the Examiner cannot be suggesting that an installer can see or hear RF signals in the air or electronic signals traveling on an Ethernet cable. Applicant therefore assumes that the Examiner has not given due consideration to the significance of the limitations emphasized above. Withdrawal of the rejections is therefore requested.

Serial No. 10/673636

Art Unit: 2617

For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited. Should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Applicants' Attorney at the number listed below so that such issues may be resolved as expeditiously as possible.

Respectfully Submitted,

January 15, 2008
Date

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Docket No. 160-007
Dd: 1/15/2008